

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Niagara Falls Boulevard Radiological Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #10
Niagara Falls Boulevard Site Removal Action
Niagara Falls Boulevard Radiological Site
A23Q
Niagara Falls, NY
Latitude: 43.0965960 Longitude: -78.9520670

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Date: 12/17/2016
Reporting Period: 10/23/2016 through 12/16/2016

1. Introduction

1.1 Background

Site Number:	A23Q	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	6/1/2016	Start Date:	6/1/2016
Demob Date:		Completion Date:	
CERCLIS ID:	NYN000206699	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Removal Assessment and Removal Action

1.1.2 Site Description

The 9540 Niagara Falls Boulevard site (CERCLIS ID NYN000206699), hereinafter referred to as "the NFB site" or "the site", is located in a mixed commercial and residential area of Niagara Falls, New York. The site consists of two parcels, namely 9524 and 9540 Niagara Falls Boulevard. This site encompasses approximately 2.53 acres. Currently, the 9524 Niagara Falls Boulevard property contains a bowling alley and an asphalt parking lot; the 9540 Niagara Falls Boulevard property contains a vacant building and an asphalt parking lot. The properties are bordered to the north by a wooded area; to the east by a church; to the south by Niagara Falls Boulevard, beyond which is a residential area; and to the west by a hotel and residential area.

In 1978, the U.S. Department of Energy conducted an aerial radiological survey of the Niagara Falls region and found more than 15 properties having elevated levels of radiation above background levels. It is believed that, in the early 1960s, slag from the Union Carbide facility located on 47th Street in Niagara Falls was used as fill on the properties prior to paving. The Union Carbide facility processed ore containing naturally-occurring high levels of uranium and thorium to extract niobium. The slag contained sufficient quantities of uranium and thorium to be classified as a licensable radioactive source material. Union Carbide subsequently obtained a license from the Atomic Energy Commission, now the Nuclear Regulatory Commission, and the State of New York; however, the slag had been used as fill throughout the Niagara Falls region prior to licensing. Based on the original survey and subsequent investigations, it is believed that the radioactive Union Carbide slag was deposited on the NFB site.

1.1.2.1 Location

9524-9540 Niagara Falls Boulevard, Niagara Falls, NY

1.1.2.2 Description of Threat

Radioactive contamination

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In September/October 2006 and May 2007, NYSDEC conducted radiological surveys of the interior and exterior of both properties on several occasions using both an Exploranium-135 and Ludlum 2221 detectors. With the exception of an office area and storage space at 9540 Niagara Falls Boulevard that was constructed after the original building directly on top of the asphalt parking lot, interior radiation levels were relatively low. The highest reading in the newer area was 115 $\mu\text{R/hr}$; elsewhere throughout the building, radiation levels generally ranged between 10 and 20 $\mu\text{R/hr}$. Exterior readings taken at waist height generally ranged between 10 and 350 $\mu\text{R/hr}$, while the maximum reading of 600 $\mu\text{R/hr}$ was recorded on contact (i.e., at the ground surface). At a fenced area behind the building located at 9540 Niagara Falls Boulevard, waist-high readings ranged between 200 and 450 $\mu\text{R/hr}$, and on-contact readings ranged between 450 and 750 $\mu\text{R/hr}$. Elevated readings were also observed on the swath of grass between the 9524 Niagara Falls Boulevard property and the adjacent property to the west that contains a hotel, and in the marshy area beyond the parking lot behind the buildings. Two biased samples of slag were collected from locations that exhibited elevated static Ludlum detector readings: one sample was collected from an area of loose blacktop that indicated readings of 515,905 cpm on the Ludlum detector, and one slag sample was collected in the marshy area that indicated readings of 728,235 cpm on the Ludlum detector.

During a reconnaissance performed by the NYSDOH and NYSDEC on July 9, 2013, screening activities showed radiation levels at 200 $\mu\text{R/hr}$ with a hand-held PIC unit around an area of broken asphalt and 500 $\mu\text{R/hr}$ from a soil pile containing slag at the NFB site. Readings over 600,000 cpm were recorded with a sodium iodide 2x2 scintillation detector from the soil and slag pile.

The Niagara Falls Boulevard Site (Site) was referred to the EPA by the NYSDEC and NYSDOH on July 21, 2013. No other removal actions have been taken by other government or private parties prior to this request.

On September 10, 2013, WESTON conducted a gamma radiation screening of the 9524 Niagara Falls Boulevard property using a Ludlum 2221 Scaler Ratemeter. On December 4–5, 2013, further radiological survey information was obtained from the 9524 and 9540 Niagara Falls Boulevard properties, as well as the church property located further east of the two site parcels. The highest gamma radiation screening results were recorded from the exposed soil area in the rear, northern portion of the 9540 Niagara Falls Boulevard property.

On December 5–7, 2013, WESTON documented the areas of observed contamination at the NFB site. The areas of observed contamination were delineated by measuring the gamma radiation exposure rates, and determining where the gamma radiation exposure rate around the source equals or exceeds two times the gamma radiation at site-specific background rates. The areas of observed contamination are defined by site-attributable gamma radiation exposure rates, as measured by a survey instrument held 1 meter above the ground surface, which equal or exceed two times the site-specific background gamma radiation exposure rate. At the NFB site, an area of approximately 168,832 ft^2 was found to have gamma radiation levels which exceed two times the background measurement of 8,391 cpm. PIC data were also collected at several points to confirm the boundary.

On December 11, 2013, WESTON collected a total of 16 soil samples (including one environmental duplicate sample) and three slag samples from fifteen boreholes advanced throughout the NFB site and the First Assembly Church property located directly adjacent to the east/northeast of the site property, using hollow-stem auger drilling methods. The two soil samples collected on the First Assembly Church property are to document background conditions. At each sample location, soil samples were collected directly beneath slag; at locations where slag was not present, the soil sample was collected at the equivalent depth interval.

The soil samples were analyzed for metals by inductively coupled plasma (ICP) technique and mercury by manual cold vapor technique in accordance with SW-846 Method 6010C and 7471B, respectively. In addition, soil and slag samples were analyzed for isotopic thorium and isotopic uranium by alpha spectrometry according to DOE method A-01-R, and radium-226 and radium-228 by gamma spectrometry according to DOE Method GA-01-R. Analytical results indicate concentrations of radionuclides found in the slag and soil to be significantly higher than at background conditions (i.e., greater than 2x background concentrations).

On April 28, 2014, EPA Contractor personnel collected radon and thoron concentration measurements from locations on and in the vicinity of the NFB site. At the selected locations in background areas, above the source material, and off the source area, radon and thoron concentration measurements in pCi/L were collected with RAD7 radon detectors. The radon and thoron measurements were collected at heights of one meter above the ground surface. The measurements included uncertainty values, which were taken into account to calculate adjusted concentrations for evaluation of observed release in the air migration pathway. There were no radon or thoron concentrations that exceeded the site-specific background, nor were there any adjusted concentrations that equaled or exceeded a value two standard deviations above the mean site-specific background concentration for that radionuclide in that type of sample (i.e., there is no evidence of an observed release to air from site sources).

Based on the Pre-Remedial Evaluation, the site did not meet the minimum criteria necessary to be placed on EPA's "National Priorities List", a list of hazardous waste sites in the U.S. which are eligible for long-term cleanup financed under the federal Superfund program. However, it was subsequently determined that material contaminated with radiation was located beneath the asphalt parking lot shared by the bowling alley and a building supply center. EPA determined that the Agency would further assess the site to determine if an action under EPA's short term, or "removal" program was warranted.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

- On October 27, 2016, the soil sample results were received for the First Assembly of God Church garage. All samples came back at background levels. No elevated gamma survey readings were observed in the church parking lot, surrounding the garage or inside the garage.
- On November 04, 2016, NYS DEC representatives, Tim Rice and Ken Martin, visited the Site.
- OSC, EPA ERT health physicists (Nguyen & Kappelman), GES, Weston and US Ecology held several meetings regarding the site disposal strategy proposal in reference to the facilities acceptance criteria. On November 17, 2016, US Ecology accepted the NFB Site overall disposal proposal and the specific disposal proposal for GNBC Office Area. However, TCLP data was required.
- On November 30, 2016, the Pace Lab preliminary soil data for Areas 1, 5 & 7 was received.
- On December 05, 2016, funding request submitted to RPB & RAB management.
- Excavation of the identified footprint in Area 5 was completed on December 12, 2016. Material has been separated by concentration. TCLP data was received for GNBC Office Area and Area 5. All results were under TCLP action limits.
- The architect blueprint for GNBC Office Area was finalized on December 13, 2016. Clean rock fill was transported to the site and stage in Area 5. In total, 30 trucks delivered 1,060.20 tons.
- On December 14, 2016, clean rock fill was transported to the site and stage in Area 5. In total, 34 trucks delivered 1,243.37 tons. Dan Telvock (Investigative Press) interviewed OSC Daly on camera. Mike Basile (US EPA Public Affairs) and Lyndsey Nguyen (ERT Health Physicists) were also interviewed off camera.
- On December 15, 2016, three trucks transported material from GNBC Office Area to US Ecology in Michigan.
- On December 16, 2016, the Area 5 Medium Concentration Material disposal proposal was approved by US Ecology.
- The High-Purity Germanium (HPGe) Detector is being utilized to analyze site soil samples in order to determine soil concentrations for operation planning.

2.1.2 Response Actions to Date

- To date, approximately 2,487 cubic yards (3,730.80 tons) of material has been removed from the GNBC Front Office and Area 5. All material has currently been staged awaiting disposal.
- Approximately 58.5 tons of material (From GNBC Office Area) has been shipped off site to US Ecology in Michigan.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs are being investigated by USEPA Enforcement Team

2.1.4 Progress Metrics

Manifest #	Date Shipped	Quantity	Units	Waste Description	Waste Code	Method of Disposal	Disposal Facility
016689001	12/15/2016	19.70	Tons	GNBC Office Area radioactive material		Direct load into Dump Trailer to Landfill	US Ecology-Michigan
016689002	12/15/2016	19.80	Tons	GNBC Office Area radioactive material		Direct load into Dump Trailer to Landfill	US Ecology-Michigan
016689003	12/15/2016	19.00	Tons	GNBC Office Area radioactive material		Direct load into Dump Trailer to Landfill	US Ecology-Michigan
016689004							
016689005							
016689006							
016689007							
Total		58.50	Tons				

2.2 Planning Section

2.2.1 Anticipated Activities

- On December 19, 2016, the GNBC Office Area blueprints to be submitted to the City of Niagara Code Enforcement Office to initiate permit process.
- Backfilling of GNBC Office Area and Area 5 with clean material.
- Rebuild of GNBC Office Area once permits approved.
- Initiation of transport & disposal of Area 5 Medium Concentration Material on December 19, 2016.
- USEPA has been coordinating with NYS, Niagara County, and local representatives throughout the assessment/removal process.

2.2.1.1 Planned Response Activities

- Disposal of of Area 5 Medium Concentration Material

2.2.1.2 Next Steps

- ERRS Funding increase

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

On May 13, 2016, ERRD Director authorized verbal funding in the amount of \$500,000.00 in mitigation funding and \$100,000.00 in RST contractor funding for a total project ceiling of \$600,000.00 to initiate an emergency Comprehensive Environmental Response Compensation and Liability Act (CERCLA) removal action at the Niagara Falls Boulevard Site.

On July 14, 2016, the ERRD Deputy Director verbally authorized \$500,000 in mitigation funding for a total project ceiling of \$1,100,000.00 to continue the CERCLA removal action at the Niagara Falls Boulevard Site.

On September 28, 2016, the Niagara Falls Boulevard Site Action Memo was signed by USEPA Headquarters.

On September 29, 2016, \$950,000.00 was authorized in mitigation funding.

On October 22, 2016, OSC Daly transferred \$200,000.00 from extramural cost (Total \$707,000.00) to the RST2 costs.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$1,950,000.00	\$1,693,335.48	\$256,664.52	13.16%
TAT/START	\$518,000.00	\$338,430.29	\$179,569.71	34.67%
Intramural Costs				

Total Site Costs	\$2,468,000.00	\$2,031,765.77	\$436,234.23	17.68%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

GES Health and Safety Officer worked with HP Lyndsey Nguyen and OSC Daly to improve existing HASP and site activities.

2.5.2 Liaison Officer

2.5.3 Information Officer

Mike Basile is the lead USEPA Public Affairs Official. Mr. Basile distributed the NFB Site Fact sheet to local officials, neighboring businesses, schools and communities on May 31, 2016 and June 1, 2016.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

NYS DEC

NYS DOH

Niagara County DOH

4. Personnel On Site

OSC Daly

OSC Jimenez

OSC Pellegrino

EPA ERT Health Physicist Lyndsey Nguyen

EPA ERT Health Physicist Dave Kappelman

Weston: One Lead and Two Technician

Guardian: RM, FCA, Two Operators and Three Techs

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.